

Application No.: 10/761,816

Filed: January 20, 2004

TC Art Unit: 1723

Confirmation No.: 9984

AMENDMENTS TO THE CLAIMS

1 - 4. (Cancelled)

5. (Currently Amended) A method of preparing a separation capillary column or channel in a microfabricated device, said column or channel comprising a polymeric monolithic separation medium, said method comprising the steps of:

providing an unfilled capillary column, or channel in a microfabricated device, said column or channel being open at both ends thereof, the inner surface of said column or channel being suitable for covalent attachment of a polymeric monolithic separation medium;

adding to said column or channel a degassed polymerization mixture comprising monomer, crosslinking agent and inert porogens;

polymerizing said mixture in the presence of an initiator in said column or channel, during which polymerization said mixture is continuously maintained under positive pressure applied from the open ends of said column or channel, whereby a polymeric monolithic separation medium attached covalently to said inner surface is formed; and

following said polymerization step, washing the rigid polymeric monolithic separation medium so formed inside said column or channel to remove said porogens and any remaining polymerization mixture.

6. (Original) The method of claim 5, wherein said polymerization mixture comprises styrene monomers.

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7. (Original) The method of claim 6, wherein said crosslinking agent is divinylbenzene.
8. (Original) The method of claim 5, wherein said polymerization mixture comprises methacrylate monomers.
9. (Original) The method of claim 5, wherein said column or channel has an i.d. of 40-50 μm .
10. (Original) The method of claim 5, wherein said column or channel has an i.d. of 20-25 μm .
11. (Original) The method of claim 5, wherein said column or channel has an i.d. of 10-15 μm or less.
12. (Original) The method of claim 9, wherein said positive pressure applied during polymerization is 10-20 psi.
13. (Original) The method of claim 10, wherein said positive pressure applied during polymerization is 30-60 psi.
14. (Original) The method of claim 11, wherein said positive pressure applied during polymerization is 75-150 psi.
- 15 - 16. (Cancelled)